

CITY OF CALDWELL FIVE-YEAR ENERGY AND RESOURCE USE ACTION PLAN

**REBUILD IDAHO
August 20, 1999**

PRIORITIES, GOALS, AND ORGANIZATION

Vision Statement

The vision of the City of Caldwell is to create a healthy quality of life for citizens, with economic sustainability forming the foundation priority. Over the next five years the City plans to implement a program that will identify and implement methods for controlling utility costs and maintaining building efficiency. Management and staff will work together to develop a systematic approach to accurately measure energy efficiency and to develop a phased approach for efficiency implementation.

The City recognizes that it has a responsibility to be good stewards and to make the best use of tax dollars to show citizens that government does work. The City wishes to demonstrate to employees, and the community that public buildings are being operated in a cost-effective manner, saving resources and maximizing tax dollars. With this guiding principle, Caldwell will become the community leader in energy efficiency, developing partnership with Albertson's College, K-12 schools, and Canyon County, eventually incorporating into a full community partnership. The City will pursue energy efficiency and make it work. We will tell our story and get others involved.

The City of Caldwell believes that actions undertaken under the Rebuild Idaho Program are wise investments and will benefit all the citizens of Caldwell. Our vision is to make "energy efficiency" a way of operation from day-to-day.

Program Goal

The purpose of this plan is to serve as a dynamic base for identifying cost-effective and economically sustainable energy and resource efficiency priorities for the City of Caldwell buildings. These priorities should meet the needs of City citizens, and staff.

Major Objectives

- Identify and describe building operation and efficiency changes that require action.

- Make City buildings as energy and resource efficient as possible.
- Control the costs of utilities for long and short term.
- Make City buildings more comfortable for staff and citizens.
- Utilize energy savings for other building and City purposes.
- Educate staff to facilitate energy-efficient behavior.
- Promote and expand the partnership.

The City will respond to education by implementing policy and procedure recommendations. They will allow employees time to fulfill program obligations; see that administration is set up to facilitate improvements; provide in-house financing for improvements that follow a financial plan; and, be a promoter and champion for Idaho communities.

Partners and Organization

Mayor Garret Nancolas is the lead of the Rebuild Caldwell Partnership. The Mayor's role is to provide the focus, leadership, staff and monetary resources that will support the development and implementation of a successful program.

Support from the program will come from the people of the community, beginning with Mayor Nancolas. The program and its potential to drive positive economic development within the community is important to the Mayor and therefore he will work to convince others to participate. The relationship between the City and the Idaho Department of Water Resources Energy Division (the Department) has large potential for creating a successful program.

The Department will assist the partnership as follows:

- Recommend operation and maintenance , resource, and efficiency changes;
- Provide training for building maintenance staff and management;
- Assistance with building surveys and audits;
- Develop the five-year energy and resource efficiency plan, and first-year strategic plan.

Other current partners in the program include service and business organizations within the community. These partners have provided input into this plan and its priorities. As partners in the City of Caldwell partnership, these organizations may provide program recommendations, planning resources, and technical support and services that are both in-kind or for pay. They are recognized as professional organizations that have an investment in the community.

Building occupants, though not specifically listed as a partner in Rebuild Caldwell, are important to the program. Their behavior, turning off unused lights and equipment etc., can reduce building energy use by 10%, a significant contribution to County expenditure reduction.

Current partners:

City of Caldwell

Garret Nancolas, Mayor
City purchasing agent;
City financial manager; and,
Ray Kennard, maintenance lead.

IDWR (the Department)

Sue Seifert, Rebuild Idaho Project Lead
Ken Baker, Project Consultant
Pat Gleason, Energy Specialist

Intermountain Gas Company

Byron Defenbach

Idaho Power Company

Kristi Pardue

CANDIDATE BUILDINGS

An energy service company will perform a preliminary feasibility study on City buildings. A report will be prepared for City consideration in selection of buildings for in-depth engineering assessments.

Utility management software will be utilized to establish a base for building energy and resource use. This data will be utilized to identify buildings with high utility costs and can assist in identifying strategies for potential energy and resource reduction.

Existing candidate buildings and square footage:

<u>Building</u>	<u>Square Footage</u>
City Hall	10,500
Air Terminal	2,700
Cemetery	2,000
Shop 1	2,325
Shop 2	6,728
Fire Dept.	10,500
Library	16,600
Police Dept.	11,000
Street Dept.	<u>1,146</u>

Total 63,499

RETROFIT OBJECTIVES

Retrofit projects that are designed to increase the efficiency of building systems will positively affect concerns that are important to City officials. Concerns such as:

- Building Safety
- Comfort, safety, and productivity of occupants
- Reductions in system failures
- Expansion of anticipated life-cycle or intended use
- Reduced maintenance and utility costs
- Increased employee productivity

Building retrofits can procure savings that enable the City to purchase new equipment, add new employees or expand existing programs.

In most circumstances, when retrofit objectives are identified in advance, the objectives can be incorporated and completed with other remodeling projects and building additions.

Targets and Time Frames

The first final draft of this plan is due by September 1, 1999. The plan has identified initial targeted buildings over a five-year period, from September 1, 1999 to September 1, 2004. It is anticipated that this target and time frame will change as the partnership grows and identified retrofit, behavioral and operation and maintenance actions are implemented.

The following actions and timelines have been identified to date:

<u>Task</u>	<u>Start</u>	<u>Complete</u>
• City Hall engineering audit and report		May, 1999
• Year-one strategic plan developed		Sept., 1999
• Two years of baseline utility data is entered into Utility Manager software		Sept, 1999
• Buildings are prioritized for audits		Nov., 1999
• Building assessments are performed and report made		Dec., 1999
• A monitoring and verification draft plan is finished	Feb., 2000	
• Staff training on behavioral strategies	On-going	

BUILDING ASSESSEMENTS, ENERGY CONSERVATION MEASURES, & OPERATIONS AND MAINTENANCE

Operations and Maintenance:

The Department will provide the City with a list of general low to no-cost operation and maintenance (O&M) options that will increase building efficiencies when put into practice. In addition, building assessments, when performed, will identify specific building by building O&M's for maintenance staff implementation.

Building Assessments:

To begin a full County Building Assessment, initial building prioritization will be performed utilizing optimizing software designed for that purpose. Up to two-years of energy and resource data, electricity, natural gas, garbage, sewer, and water will be entered into utility management software. This base data will be used to determine potential cost-saving measures, and to evaluate future energy and resource use and savings.

Utilizing a combination of an energy service company (ESCO) and engineering services, building assessments will be conducted on City buildings identified earlier in this plan. Assessment priority will be based on utility management data, computer analysis, City priority and financial capabilities. Once assessments are completed, buildings will be selected for retrofit action. The selection criteria includes:

- The potential for building energy savings;
- An estimate of time and dollars needed to perform the measures;
- The availability of time and resources to devote to the project;
- The potential of installing effective building ECMs (energy conservation measures).

Building assessments will be an in-depth analysis of the whole building including:

- Lighting and control systems;
- The building envelope;
- Engineering analysis of building mechanical systems such as pump airflows, and equipment operating efficiencies.

An assessment report will include the following:

- Recommended Energy Conservation Measures (ECM's)
- Life Cycle Costing optimization where appropriate
- Calculation of ECM simple payback
- Identification of existing operating efficiencies
- An estimated cost for ECM implementation
- Identification of funding options to measure implementation
- Identification of Operations & Maintenance's (O & M's)

The assessment team will be lead by a contract engineer and include the Department and City staff. An assessment report will be prepared with recommendations for ECM actions for the City's consideration. Life cycle cost analysis will be utilized for ECM assessment to facilitate the City in optimizing their return on investment.

COSTS AND RETURN-ON INVESTMENT

The City anticipates that implementation of ECM's will produce a 10% reduction in total electrical and natural gas energy use. However, proposed ECM's will go through a life cycle cost analysis.

ACTIONS AND RESPONSIBILITIES

The partnership will be supported from the top down. Financial support will be given through the established City of Caldwell budgetary process. The continuing planning process will be designed to bring on-going support from partners and other stakeholders as they are identified.

The Department and the Mayor will be the lead facilitator in development of the City of Caldwell action plan. In addition, the Department will:

- Provide utility management software and training to the City;
- Assist the City in obtaining funding and resources for plan implementation;
- Assist in procuring engineering services for the FEDS analysis and building energy assessments;
- Retain contact with the other partners throughout the five-year plan period and lead process in the development of new actions and strategies;
- Assist in the development of a monitoring and verification plan;
- Procure training for the team in life cycle cost analysis;

- Facilitate communication between the partners and other Idaho partnerships;
- Promote the Partnership locally and nationally;

Products and services available through the national Rebuild America program will be identified during the first six months of plan implementation – September 1, 1999 to February 28, 2000.

BARRIERS

Potential barriers to effective program implementation include:

- Appropriation of resources, staff, partners, and dollars, to produce effective and timely implementation of measures;
- Determining or establishing priorities as change occurs;
- Program approval from Council members;
- Dealing with the uncertainty of uncontrolled outside influences on priorities.

MONITORING, EVALUATION, AND REPORTING

Data on monthly energy use will be compiled by the City to establish a baseline of energy use for all City buildings. A monitoring and evaluation plan will be developed utilizing a monthly reporting format that will be established to document actual energy use for each City building. This data will be used to assess post-improvement performance of retrofitted buildings. Reports summarizing energy, resource and cost savings will be prepared and presented semi-annually to the City Council. Monthly savings reports utilizing a standardized format will be forwarded to the Department for assistance in program analysis.

PROMOTION AND EXPANSION

Through coordination with City management and staff, the Department will develop a plan for promoting and expanding the Partnership locally and nationally through implementation of the program. We will promote the Partnership savings and successes through the national Rebuild America program and publications, and through publication in the Department's Currents newsletter. Case studies will be developed for distribution and publication on the Department's Rebuild web site. Local press releases will be utilized for marketing program implementation successes.

REBUILD CALDWELL PARTNERSHIP CHALLENGE

The Partnership that is currently formed to include service and business organizations within the

community is “challenged” to actively participate in formation and implementation of the City of Caldwell’s five-year energy and resource use action plan. Partners are specifically recruited and selected to bring their particular expertise and experience to the program. Each partner will be requested or challenged to assist the City in determining both short and long range goals and objectives that can be accomplished.

FISCAL YEAR REPORT

The Partnership will produce a “yearly” report that outlines the progress and successes of the City’s Rebuild Program. The report shall be presented to the City Council at a pre-determined public meeting. Portions of the report, or the information contained in it, may be used by Rebuild Partners to promote the program.